

**To:** Daniel Telvock[dtelvock@investigativepost.org]  
**From:** Daly, Eric  
**Sent:** Wed 6/15/2016 9:33:30 PM  
**Subject:** Re: Niagara Falls Boulevard and Holy Trinity Cemetery Sites-Telvock

Thanks for the attachment. I will look at tomorrow. As far as below, which gamma survey are you referring to that shows 500 ur/hr?

Regards,

Eric

"We must, indeed, all hang together, or assuredly we shall all hang separately", Benjamin Franklin

Eric M. Daly

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On Jun 15, 2016, at 5:12 PM, Daniel Telvock <dtelvock@investigativepost.org> wrote:

Thanks, Eric. This helps.

For clarification on my points, the bowling alley lot area found readings as high as 500 ur/hr and background is typically about 7-9 ur/hr. That's almost 60x background for what it's worth. The 100 times background is more what was found at cemetery and 738 Upper Mnt Road (which I realize is not on your project list yet) where records show readings above 700 ur/hr.

The soil samples, not surprisingly, are much higher, which you point out.

Dan Telvock

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On Wed, Jun 15, 2016 at 4:51 PM, Daly, Eric <[Daly.Eric@epa.gov](mailto:Daly.Eric@epa.gov)> wrote:

Hi All:

Sorry I didn't get back to the group sooner. Very busy at the Site.

- We do have a similar history for Holy Trinity. I will get that to you.

- I was not involved in the assessments for 738 Upper Mountain Road. I do not believe it was even referred to the Removal Program from the Pre-Remedial Program. So I cannot speak on that.

- As far as the 1986 report listing 60 properties, I do not know the specifics of that information or if it is still valid. As described during the interview, the standard process of us getting sites goes from local, county, state and then referred to USEPA. You are aware of the four sites that were referred to EPA Pre-Remedial and the two that were considered potential removal eligible under the Removal Program. Has any other local or state agency assessed these other 60 properties you mention? Are there any more recent documents on the status of these properties? If so, I will pass it on.

- Regarding the Niagara Falls Boulevard data.....this is the problem with talking about data in a parking lot. Different sites, lots of numbers, different data points, different assessment dates to memorize. When you asked me the question about 100 times background, I was thinking about the gamma levels emanating from the parking lot. 30 times background was stuck in my head. So I apologize. We do need to be more specific during our discussions on what type of data we are talking about if we are comparing the radiological material to background.

Gamma survey data is different than soil data. This should clear it up based on historical NYSDEC data and EPA data:

**This is an excerpt from the NYSDEC Summary for NFB:**

“Further investigation and sampling were performed on the exterior areas of the Site including two biased samples of contaminated fill material were collected from locations that exhibited elevated readings. One of the samples was collected from an area of loose blacktop and indicated readings of approximately **171 times greater than background**. See Attachment B for picture of sample location. The other samples were obtained from a slag pile located in a marshy area north of the parking lot that indicated readings greater than **200 times greater than background**.”

You should have this full Pre-Remedial report from your FOIA. The state is referring to two soil samples they collected from a loose asphalt area and a pile of slag.

**EPA Pre-Remedial Assessment for NFB:**

Soil sample results: Ra-226 at 199 pCi/g and Ra-228 at 807 pCi/g maximum concentrations found in their soil samples. The background results were approximately 1.13 pCi/g for Ra-226 and 1.24 pCi/g for Ra-228. So that is about **176 times background for Ra-226 and 650 times background for Ra-228**. So that is the answer to your question regarding soil concentration for two specific radionuclides.

Gamma survey results: The results were roughly **30 times background** in the parking lot (This is where I got the 30 times). Approximately, **25 times background** in specific unoccupied areas of GNBC interior space. That is the answer to gamma radiation.

**EPA Removal Site Evaluation for NFB:**

Soil sample results: maximum concentrations of the radionuclides of concern in the outdoor samples were Ra-226 at 4.60 pCi/g and Ra-228 at 13.6 pCi/g. This was the assessment that I was involved in. We were conducting sampling on the perimeter of the site to determine extent of contamination. So this isn't the maximum soil analysis result found by the two program. This is just pointing out that the removal program found some levels of the radionuclides of concern that exceeded our preliminary calculated cleanup values during that assessment.

Speaking of cleanup values. That is something we didn't discuss. Potential risk calculations are used to figure out if a cleanup is warranted or not. So just having 50 times background or 100 times background of a specific contaminant via soil sample or survey instrument doesn't necessarily mean a removal is warranted. There has to be other factors considered. In our case, routes of exposure and occupancy/frequency of humans inhabiting the area of concern are two factors. So in general, elevated sample or survey results does not necessarily activate a specific agency or program to perform an action. For example, this site did not qualify for the National Priority List under our Remedial Program. Lastly, the gamma survey or other real time monitoring readings are qualitative and used for scoping out the area of interest and finding elevated areas. Soil sampling and radon sampling are quantitative and what we are using to determine risk and develop our action limits at this Site.

Regards,

Eric

"We must, indeed, all hang together, or assuredly we shall all hang separately", Benjamin Franklin

Eric M. Daly

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**From:** [dtelvock@gmail.com](mailto:dtelvock@gmail.com) [mailto:[dtelvock@gmail.com](mailto:dtelvock@gmail.com)] **On Behalf Of** Daniel Telvock  
**Sent:** Wednesday, June 15, 2016 12:16 PM  
**To:** Daly, Eric <[Daly.Eric@epa.gov](mailto:Daly.Eric@epa.gov)>  
**Cc:** Rodriguez, Elias <[Rodriguez.Elias@epa.gov](mailto:Rodriguez.Elias@epa.gov)>; Basile, Michael <[Basile.Michael@epa.gov](mailto:Basile.Michael@epa.gov)>  
**Subject:** Re: Interview - Friday June 10, 2106 - 10:30 am

Eric, do you have a similar draft action report for Holy Trinity?

In addition, it is not clear why the EPA is not moving forward with similar removal programs for 738 Upper Mnt Road and considering assessments for the other approximate 60 properties identified as "anomalies" in the Oak Ridge report published in 1986 based on the DOE's 1979 aerial surveys. I visited 738 Upper Mnt Road myself with a scintillation counter and was getting 500,000 CPM when background was at 7000-10000 CPM

I've also reached out to Elias about the responses in the interview. Eric, I had mentioned that levels found at the Bowling Alley-Supply store parking lot reached above 100 x background. Your action report confirms this, in fact it shows that the levels measured are even higher than what I saw in public records. But in our interview you said the measurements did not reach that high.

I am also confused as to how the "2013-2014 EPA Pre-Remedial Assessment Report," the maximum concentration of the radionuclides of concerned were Ra-226 at 199 pCi/g, and Ra-228 at 807 pCi/g."

But the 2015 EPA Removal Site Evaluation data, the maximum concentrations of the radionuclides of concern in the outdoor samples were far less at Ra-226 at 4.60 pCi/g and Ra-228 at 13.6 pCi/g."

I assume these are completely different sections tested? And I assume both 199 pCi/g, 807 pCi/g still exists at the property?

Thank you,

Dan Telvock

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On Wed, Jun 15, 2016 at 12:01 PM, Daly, Eric <[Daly.Eric@epa.gov](mailto:Daly.Eric@epa.gov)> wrote:

Hi. I assume the attachments you are looking for are the Pre-Remedial Assessment Report and the Removal Evaluation Data? The Pre-Remedial Assessment Report is attached. The historical summary Elias provided is from my draft action memo. The Removal Evaluation Data is still in draft and not finalized. So the numbers are referenced but no official report.

Thanks

**From:** Rodriguez, Elias  
**Sent:** Wednesday, June 15, 2016 11:32 AM  
**To:** Daniel Telvock <[dtelvock@investigativepost.org](mailto:dtelvock@investigativepost.org)>  
**Cc:** Basile, Michael <[Basile.Michael@epa.gov](mailto:Basile.Michael@epa.gov)>; Daly, Eric <[Daly.Eric@epa.gov](mailto:Daly.Eric@epa.gov)>  
**Subject:** RE: Interview - Friday June 10, 2106 - 10:30 am

Hello Mr. Telvock, Subsequent to EPA providing you an interview (June 10) with Eric Daly, On-Scene Coordinator for EPA, you called me and posed additional questions.

You asked about the history if the Site. In response, we are providing you with the Site History as we understand it. (Please see below).

In regards to your questions about health impacts. You may wish to submit your health questions to the appropriate State or County health agency.

Thank you,

Elias Rodriguez, M.P.A.  
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Site History (Removal Program) Niagara Falls Boulevard Site, Niagara Falls New York)

In 1978, the U.S. Department of Energy (DOE) conducted an aerial radiological survey of the Niagara Falls region and found more than 15 properties, including the Site, having elevated levels of radiation above background levels. It is believed that, in the early 1960s, slag from the Union Carbide facility located on 47<sup>th</sup> Street in Niagara Falls was used as fill on the properties prior to paving.

During the Pre-Remedial assessment, the term “slag” was used to designate the first foot of soil comprising of mainly rock-like and/or clay-type material that could easily be crushed into a fine powder. The slag was shown to have the highest concentration of Ra-226, Ra-228, U-238 on the Site and exhibited the great contribution to exposure rates and dose rates to the public. During Removal Action assessment, soil samples were taken along the perimeter of the Site and were taken at various depths from surface to three feet. In general throughout this document the term “soil” sample has been used to for both slag and non-slag soil samples. For samples specific to the Pre-Remedial Assessment, the term “slag” is used only for the first foot of soil containing rock-like and/or clay-type material.

From September 2006 through July 2013, New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) conducted radiological surveys of the interior and exterior of both parcels. The only interior spaces with elevated exposure rate readings were located in an office area and warehouse space of GNBC. The exposure rate readings obtained in these spaces were roughly ten times above the background readings. The exterior readings taken at waist height (approximately 3 feet off the ground surface) of both parcels were as high as thirty times background. Further investigation and sampling were performed on the exterior areas of the Site including two biased samples of contaminated fill material were collected from locations that exhibited elevated readings. One of the samples was collected from an area of loose blacktop and indicated readings of approximately 171 times greater than background. The other samples were obtained from a slag pile located in a marshy area north of the parking lot that indicated readings greater than 200 times greater than background.



From September 2013 through December 2013 USEPA Pre-Remedial Program conducted radiological surveys of the exterior of both parcels and confirmed previous work performed by NYSDEC and NYSDOH. See Attachment C for gamma survey of the exterior surface of the Site. To quantify the contamination identified, a total of 19 soil samples (including one environmental duplicate sample) were collected from 15 boreholes throughout the main footprint of the Site using hollow-stem auger drilling methods. Two soil samples were collected on the adjacent First Assembly Church property to document background conditions. Per the “2013-2014 EPA Pre-Remedial Assessment Report,” the maximum concentration of the radionuclides of concern were Ra-226 at 199 pCi/g, and Ra-228 at 807 pCi/g.

From July 2015-August 2015, the USEPA Region 2 Removal Program conducted further radiological assessment of the interior and exterior of both parcels. The goal for this assessment was to determine the extent of contamination (i.e. how far does the contamination extend beyond the Site boundary determined by Pre-Remedial Program in 2013), as well as, determine interior contamination impacts (i.e. are workers exposed to elevated levels of radon/thoron or loose contamination). As reported from the Pre-Remediation Program, the office area and warehouse space located at GNBC showed elevated readings of roughly 25 times higher than background. Specific sections of the RBC also exhibited elevated gamma radiation levels. The walk-in cooler of the RBC building gamma survey readings were as high as 4 times background and the north end rear vestibule gamma survey readings were as high as 6 times background. Again, as documented by the Pre-Remedial Program, the exterior area of the Site showed the highest elevation of contamination at roughly 30 times background. From the data and history of the site, the elevated readings of the interior areas located at both properties are likely to be due to newer additions of the buildings built on top of fill dirt.

USEPA Region 2 Removal Program took a total of sixteen (16) soil samples including one environmental duplicate sample. Fifteen (15) boreholes were collected throughout the perimeter of the Site using hollow-stem auger drilling methods. See Attachment D for soil sample results of Pre-Remedial Assessment and Removal Action Assessment. The other samples were soil samples collected on the adjacent First Assembly Church property to document background conditions. Per the 2015 EPA Removal Site Evaluation data, the maximum concentrations of the radionuclides of concern in the outdoor samples were Ra-226 at 4.60 pCi/g and Ra-228 at 13.6 pCi/g. The extent of depth of contamination was determined to be at a two foot depth where majority of elevated exposure rates was due to the slag located in the first foot depth of the exterior surface.

The U.S. Environmental Protection Agency (EPA) issued guidance entitled “Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination” (OSWER No. 9200.4-18, August 22, 1997). This 1997 guidance provided clarification for establishing protective cleanup levels for radioactive contamination at CERCLA sites. As outlined in 40 CFR § 300.430(e)(2)(I)(A)(1), the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) provides that, for carcinogens, preliminary remediation goals should generally be set at levels that represent an upper-bound lifetime cancer risk to an individual of between  $10^{-4}$  and  $10^{-6}$  when Applicable or Relevant and Appropriate Requirements (ARARs) are not available or are not sufficiently protective.

Since removal actions are not a part of the remedial program, removal is not mandated to meet the risk requirements of  $10^{-4}$  to  $10^{-6}$  for site cleanups. However, in recent years, EPA has encouraged removal cleanups to meet, at a minimum, the remedial cleanup values associated with the  $10^{-4}$  carcinogenic risk based on the reasonable maximum exposure for an individual. To determine if contamination levels exceed the cancer risk of  $10^{-4}$  (i.e. 1 in 10,000 of cancer), a risk assessment must be performed. EPA’s Preliminary Remediation Goal (PRG) Calculator was created to help calculate risk vs. cleanup levels for various receptors taking into consideration exposures from all potential pathways, and through all media (e.g., soil, ground water, surface water, sediment, air, structures, etc.). The most conservative receptor used for determining the cleanup values for the removal was the scenario involving a composite worker whose daily duties included both indoor and outdoor activities. The cleanup value established for the site, based on an increase of  $10^{-4}$  cancer risk, are:

Radium-226 at levels in excess of 2.48 picocuries per gram (pCi/g)

Radium-228 at levels in excess of 15.90 picocuries per gram (pCi/g)

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